

Poliovirus Infection, Including Poliomyelitis

Agent: Poliovirus

Mode of Transmission: Person-to-person transmission through ingestion of contaminated food or direct contact with fecal material from infected people.

Signs/Symptoms: Up to 90% of all polio infections are asymptomatic. Ten percent will develop into a non-specific syndrome with fever, malaise, headache, nausea, and vomiting. Flaccid paralysis occurs in less than 1% of poliovirus infections.

Prevention: Vaccine should be administered beginning at 2 months of age. Four doses of trivalent, inactivated poliovirus vaccine (IPV) are recommended with the last dose administered prior to kindergarten entry and after the fourth birthday.

Other Important Information: Polio eradication programs, which primarily utilize oral poliovirus vaccine (OPV), have led to the elimination of the disease in four of the six World Health Organization (WHO) designated regions. Polio incidence has dropped more than 99% since the launch of global polio eradication efforts in 1988, and 80% of the world's population now live in polio-free areas. Additional progress toward polio eradication was made in 2015 when type 2 poliovirus, one of the three serotypes, was declared eradicated. No cases of type 3 poliovirus have been detected since 2012. Type 1 poliovirus is the most pervasive and continues to circulate in endemic countries of Afghanistan, Pakistan, and Nigeria. The WHO recommended in 2015 that all countries using oral poliovirus vaccine change from trivalent (types 1, 2, and 3) to bivalent (types 1 and 3) to reduce the risk of vaccine-derived poliovirus transmission (VDPV).

No poliovirus infections were reported in Virginia in 2016. The last reported case of poliomyelitis in Virginia occurred in 1978. In 2011, Virginia's reporting requirements were changed to require reporting of any poliovirus infection, not only poliomyelitis.

Progress was made during 2016 for worldwide polio elimination in the endemic countries of Afghanistan and Pakistan. Afghanistan reported 13 cases; this is a continued decline from 20 cases in 2015 and 28 cases in 2014. Pakistan also reported a significant reduction with 20 cases reported in 2016 compared to 54 cases reported in 2015, and a 93% reduction from the 306 cases reported in 2014.

After being declared "polio-free" by the World Health Organization in 2015, progress made in Nigeria has been compromised by insurgency-related insecurity. Following the liberation of areas that were under insurgent control, such as Boko Haram, at least three cases of polio were found. Until poliovirus transmission is interrupted in these endemic countries, all countries remain at risk of importation of polio, especially in the "wild poliovirus importation belt" stretching from west Africa to central Africa and the Horn of Africa.